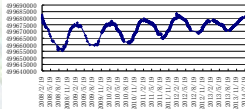
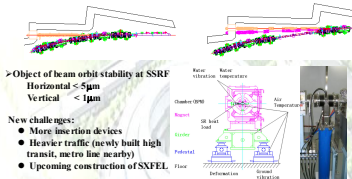


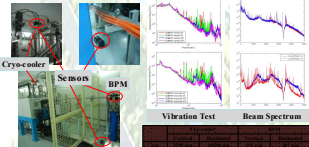


## Abstract

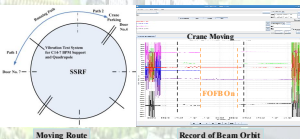
Beam orbit stability is one of the most important requirements for synchrotron radiation facilities, while mechanical stability of key components in storage ring is essential to beam orbit stability. Some mechanical related phenomena that may influence the beam orbit stability are observed during the operation, such as the vibration generated by cryo-cooler, the change of ring circumference. The mechanical stability monitoring for BPM, magnet, storage ring floor, as well as influence of crane running on beam stability are described. Possible measures are also discussed and suggested to improve the beam orbit stability.



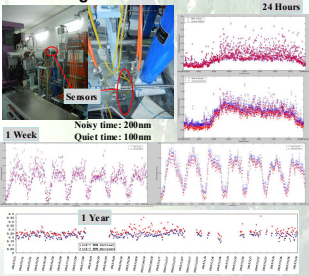
## Influence of Cryo-cooler on Beam Stability



## Influence of Crane on Beam Stability



## Long-term Mechanical Stability Monitoring of C14-7 BPM

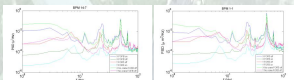


Beam current: 230mA

- Crane still
- Crane moving
- With FOFB
- Without FOFB

Floor Motion Monitoring using HLS

Vibration Test



Beam Spectrum

- Crane moving affects beam orbit, but beam orbit stability improves greatly with the operation of fast orbit feedback system.